

neath similar bodies in a younger and less developed state and of a greenish-yellow colour.

*Spiloma auratum*, Turn. & Borr. Lich. Brit. 33!; E. Bot. t. 2078; Hook. Br. Fl. 2. 165.

The pulvinuli consisted of masses of irregular rounded granules heaped together without order or arrangement, darker or brownish on the exterior, of a full yellow internally, and apparently breaking up into very minute granules. I could not detect any pedicels.

*Spiloma nigrum and its varieties*  $\beta$ . &  $\gamma$ , Turn. & Borr. Lich. Brit. 35!; E. Bot. t. 2076 & 2077; Hook. Br. Fl. 2. 166.

The pulvinuli here also were formed of roundish black granules.

*Spiloma fuliginosum*, Turn. & Borr. Lich. Brit. 37!; E. Bot. t. 2150; Hook. Br. Fl. 2. 166.

Similar to the last, but the pulvinuli confluent and scattered.

*Spiloma decolorans*, Turn. & Borr. Lich. Brit. 39!; E. Bot. t. 2399; Hook. Br. Fl. 2. 166.

The sorediate or variolariose state of some thallus.

*Spiloma punctatum*, Turn. & Borr. Lich. Brit. 40!; E. Bot. t. 2472; Hook. Br. Fl. 2. 166.

A section of the apothecia shows them to be composed of a dark brown or blackish perithecium enclosing a pale transparent nucleus, whose upper surface is covered with a dark brown layer. No traces of asci or sporidia. Most probably the young or punctiform state of some *Opegrapha*.

*Spiloma tuberculosum*, Hook. Br. Fl. 2. 167; E. Bot. t. 2556. Something old, imperfect and in decay.

XLI.—Notes on the Ornithology of Ceylon, collected during an eight years' residence in the Island. By EDGAR LEOPOLD LAYARD, F.Z.S., C.M.E.S. &c.

[Continued from p. 264.]

179. MEGALAIMA CANICEPS, Frank.

Syn. *Bucco Zeylanicus*? (Linn.).

*Kotooroal*, Cing. *Kotoor*, Mal.

One of our commonest species and universally distributed. It feeds on fruits and berries of all kinds, which it swallows entire; it does not, that I know of, devour small birds when in a state

of nature, but one kept in a large aviary in Colombo destroyed all the little *Amadina* placed with it. Not content with snapping them up when within his reach, he would lie in wait for them behind a thick bush or the feeding-trough, pounce upon them unawares, and after beating them a little on the ground or perch, swallow them whole. When this cannibal came into my possession, he was confined in a smaller cage than that in which he had at first been secured; this seemed to displease him, and he went to work to find some means of escape; he narrowly examined every side and corner to discover a weak spot, and having detected one, applied himself vigorously to bore a hole through it, as a woodpecker would have done; grasping the bars with his feet, he swung himself round, bringing his whole weight to bear upon his bill, which he used as a pickaxe, till the house resounded with his rapid and well-aimed blows. On being checked from exercising his ingenuity in this manner, he became sulky and refused to eat, or offer his call of recognition when I approached him; in a day or two, however, he apparently thought better of the matter, resumed his labours upon another spot, and fed as voraciously as ever, devouring huge slices of bananas, jungle fruits, the bodies of any small birds I skinned, &c. &c. I hoped he would have lived long with me, but found him dead one morning at the bottom of his cage, and as he was fat and well-favoured, I presume he died a victim to the solitary system.

The species builds in hollow trees, laying three or four pure white, but very shining eggs. Axis 1 in. 1 line, diam. 11 lines. The natives all affirm that the birds hollow out their own nest-hole. One I saw was in an unsound tree, the nest slightly formed of a few bents of dry grass.

#### 180. MEGALAIMA FLAVIFRONS, Cuv.

This Barbet is confined to the hilly zone, where it predominates over the other island species. It may be heard at a great distance, and distinguished by its shrill call. Breeds in hollow trees in the month of February: lays three or four roundish, polished white eggs.

#### 181. MEGALAIMA PHILIPPENSIS, Briss. *Mal-Kotoor*, Cing.; lit. Flower-Kotoor. *Kokoorupan*, Mal.

This is the prevailing species in the northern province, where it has acquired the name of "coppersmith" among the Europeans, from its ceaseless call, which resembles the knocking of an artisan engaged in the manufacture of a caldron. It frequents the tamarind trees, on the fruit of which it feeds. Like the

other species, it breeds in holes, and I have seen it in the act of excavating them in decaying portions of living trees.

182. MEGALAIMA RUBRICAPILLA, Gmel. *Mal-Kotoor*, Cing.

Very common about Colombo; I have also seen it from Batticaloa, and procured it at Jaffna. It frequents the banian trees in great numbers and feeds upon the ripe fruits, swallowing them entire.

183. PICUS GYMNOPTHALMOS, Blyth, J. A. S. no. xxxii.

The smallest of our Woodpeckers, and peculiar to the island. I first discovered it near Colombo in the year 1848, and it was described by Mr. Blyth in 1849, *loc. cit.*

It is sparingly, at the same time widely, distributed, and delights in creeping about the jack-trees; it is therefore more plentiful to the south of the island, in the cultivated portions, than towards the northern and jungle districts.

Irides the palest possible yellow; eyelids deep purple.

184. PICUS MAHRATTENSIS, Latham.

Confined to the northern province, and found principally about the dead limbs of the *Euphorbia* trees. I have not seen more than half a dozen specimens.

185. PICUS MACEI, Vieill.

Dr. Kelaart includes this in his Catalogue, *sed non vidi*.

186. GECINUS CHLOROPHANES, Vieill.

Not uncommon in the neighbourhood of Colombo, and in the lower ranges of the hills. Dr. Kelaart says that at Nuwera Elia it "is very frequently seen." Of all our Woodpeckers this seems the only one addicted to walking, and seeking its food on the ground. Here it is often found in pairs, breaking into the dried masses of cow-dung in search of Coleoptera. On being alarmed it takes refuge on the nearest tree or bush, and displays all the arboreal activity of its tribe, climbing round the branches and evading the eye by carefully keeping on the opposite side of the limbs.

187. BRACHYPTERNUS AURANTIUS, Linn. *Tatchan-coorovi*, Mal., and *Pastru carpentaru*, Port.; lit. Carpenter-bird. Applied, in fact, indiscriminately to all the Woodpecker tribe, but more especially to this species from its vigorous knocking.

The Yellow-backed Woodpecker is confined exclusively to the

Borassus-growing districts, commencing at Chilaw sparingly, and increasing in numbers till its knocking resounds from almost every palmirah tope in the Jaffna peninsula. In these trees it likewise breeds, excavating large holes in the male trees, they being generally softer than the female.

In the jungle and among the cocoa-nut plantations of the south and central portion of the island it is entirely replaced by

188. BRACHYPTERNUS CEYLONUS, Forster. *Kāāralla*, Cing.; sometimes *Keberella*, Cing.

—which is peculiar to Ceylon, and very common in the low country. Dr. Kelaart also characterizes it as “found in great abundance at Nuwera Elia.” In habits it precisely resembles the preceding. Irides red-brown. Its call is a shrill, stridulous scream, often uttered during its flight, which is maintained by short, rapid jerks, repeated at considerable intervals.

189. BRACHYPTERNUS STRICKLANDI, Layard.

I procured a solitary specimen of this new Woodpecker at Gillymalle; it proved a female; but Mr. Thwaites having forwarded a large number of both sexes from Kandy, I am enabled now to describe it fully. Length about 11 in., of closed wing  $5\frac{1}{4}$  in.; tail  $4\frac{1}{4}$  in.; bill  $1\frac{3}{4}$  in.; tarsi 1 in.

General colour of back scarlet-maroon, each feather being maroon edged with scarlet; the filamentous feathers on the lower portion of the back near the tail-coverts (which with the tail are brown) are brilliant scarlet. Wing primaries of a lighter brown than the tail-feathers, the outer webs margined maroon, changing into scarlet. Inner webs of the secondaries marked with four large circular white spots; the interior primaries have but three spots, the middle two spots, the outside of all but one. The feathers of the breast and neck chiefly buff with an albescent centre and dark brown edge, giving these portions a scaly appearance, which is lost on the sides and belly, where it merely assumes a mottled irregular form. Chin white, with five distinct very dark brown lines down it. Head of female brown, with numerous good-sized white ocelli (in the male this portion is brilliant scarlet), the feathers over the nostrils light brown; a streak of the same colour forms an eyebrow. Bill light corneous; legs bluish. Irides red-brown.

In habits this species resembles *B. Ceylonus* and *aurantius*. The natives discriminate between it and the former, and tell me that it keeps more to jungle than palm trees.

I dedicate it to the memory of the esteemed naturalist, whose early loss after my acquaintance with him I have never ceased to deplore.

Dr. Kelaart includes *B. rubescens*, Vieill., in his list, on the authority of Mr. Blyth, but in his catalogue of the A. S. Museum Mr. Blyth doubtfully gives it as a synonym of *B. Ceylonus*. Can this be my *B. Stricklandi*?

#### 190. MICROPTERNUS PHAIOCEPS, Blyth.

Decidedly a rare species in the island and almost confined to the south; in fact I have found but one specimen elsewhere, which was in the jungle near Ratnapoora. It is generally seen in pairs.

Of this species Mr. Blyth writes in *epistold*, "Your Woodpecker might make a fourth race of *Micropternus*, on the principle that *M. gularis* is separable from *M. phαιοceps*." It is singular that out of our small number of *Picidæ*, nearly all should be peculiar or nearly so to the island, and that even in this instance of one of the coast species a difference should occur.

#### 191. CENTROPUS PHILIPPENSIS, Cuvier. *Atti-Cuccula*, Cing. *Chempagam*, Mal.

The common "jungle crow" of European residents is universally distributed. It feeds upon grasshoppers, locusts, leaf-insects, caterpillars, spiders, &c. On the ground it marches about with a pompous air and outspread tail, scanning every blade of grass and making short but rapid darts upon the various insects which fly up at its approach. When of its own free will it resorts to a tree, it flies slowly, sailing along on its rounded wings, frequently progressing sideways; on reaching its destination it jerks up its tail, uttering its monotonous cry of "*whoot, whoot, whoot*," and climbs about the branches, beating the bark for *Phasmia* and other insects, which trust in their resemblance to the vegetable world for escape from the bills of their numerous enemies.

On being alarmed it scrambles rapidly to the summit of the tree in perfect silence, and glides away in a contrary direction to that whence the cause of its terror sprung.

I procured a singular albino bird of this species at Pt. Pedro. It was generally smaller, the black and purple portions were changed to a dirty creamy white, the dark red portions to a light brown. The specimen is now in the British Museum.

#### 192. CENTROPUS CHLORORHYNCHOS, Blyth, J. A. S. No. xviii.

This species I discovered in the year 1848, between Colombo and Kandy, on the Avishavelly road. I forwarded the only specimen procured to Mr. Blyth, who described it, *loc. cit.*, and saw no other till the spring of last year, when on my intended trip to Adam's Peak I shot another in some native gardens at Hang-

welly, not far from Colombo, intermediate in fact between it and Avishavelly, and three more in the dense jungle near Pallabadoola, at the foot of the Peak. These are the only specimens hitherto procured of this bird. Dr. Kelaart does not appear to have seen it, and none have been received among Mr. Thwaites's collections. It is then doubtless confined to the particular locality where I obtained it, and is there anything but common. It has the same habits as *C. Philippensis*, and the same call and cat-like mewling note. Irides red, as in the former.

#### 193. OXYLOPHUS MELANOLEUCOS, Gmel.

Abundant in open plains dotted with low bushes from Hambantotte to Jaffna. It sits upon the tops of the Euphorbia trees and utters a chattering cry.

Shooting one morning in the vicinity of Pt. Pedro, I observed a pair of Mud birds (*Malacocercus Bengalensis*), which hovered about an isolated bush with all the solicitude of parent birds attending upon a nest of young ones; when I drew near they flew before me, feigning lameness, and endeavoured to draw off my attention from some object in the bush; this I soon found was a young *Oxylophus*, which I captured, the Mud birds meanwhile flying about my head, uttering the most unmistakeable cries of distress. I found no other young bird or nest in the bush, which was a small one, and am convinced that these were foster parents to the young cuckoo.

#### 194. OXYLOPHUS COROMANDUS, Linn.

One of our rarest species, only a few specimens falling under my notice during my residence in the island. One I killed in Jaffna, another near Colombo, and the last near Ratnapoora.

#### 195. EUDYNAMYS ORIENTALIS, Linn. *Coosil* and *Coël*, Mal. *Coha* and *Cowde-coha*, Cing.

Wherever crows are found there the "Coël" is found also, depositing a single egg in the unguarded nest of either *Corvus splendens* or *C. culminatus*, indiscriminately.

The egg thus surreptitiously fathered upon the unsuspecting foster parents is of a palish neutral green colour, mottled very thickly with dark blotches. Axis 1 in. 3 lines; diam. 1 inch. It is laid in the month of February and hatched about March. When the young are hatched, they appear (according to native testimony) to eject the young crows in a manner similar to that by which the European cuckoo gets rid of its hapless brethren. Crows seem to have a great antipathy to these birds, and pursue

them relentlessly whenever they appear, while the Coël, like a thief taken in the act, seeks safety in ignominious flight.

The natives so much admire the note of this bird, that their poets compare thereto the voices of their mistresses. If we are to believe that a soft voice is a beautiful thing in a woman, we cannot coincide in opinion with them, for the Coël's loud call may be heard a mile away.

#### 196. CUCULUS MICROPTERUS, Gould.

Dr. Kelaart includes this species among the Ceylon birds, and states that it is a mountain species and found but rarely at Dimboola. I have not met with the species, but perhaps the following young bird, which I cannot identify with anything in the British Museum, may be the young of this species. I name it provisionally

#### 197. CUCULUS BARTLETTII, Layard.

Young. Length  $10\frac{3}{4}$  in.; of closed wing 6 in.; tail 6 in.; bill 11 lines; tarsi 8 lines.

General colour of back bluish gray with a rufous tinge, which prevails most on the head and on the extreme edge of the outside webs of the tail-feathers; a double row of alternating whitish triangular spots runs down the quills of the last feathers. Wing-feathers banded with white; throat and breast rufous brown barred with white; belly and vent white barred with brown; under tail-coverts barred sparingly in the same manner; over the eye there is a row of white dots commencing at the base of the bill which has a dark brown upper mandible, the lower being yellow with a brown tip; feet yellow. Irides dark brown.

I have obtained many examples of this bird in this state, both at Pt. Pedro and Colombo. It frequents native gardens, delighting in the shade and uttering a piping note.

#### 198. CUCULUS CANORUS, Linn.

A single specimen of this bird, procured in the old Botanical Gardens at Kew, near Colombo, has fallen under my notice. It was shot on an American cork-wood tree (*Bignonia*), the same on which I killed *Motacilla boarula* before mentioned, and three specimens of

#### 199. CUCULUS VARIUS, Vahl,

being the only examples I have seen of these birds.

#### 200. CUCULUS SONNERATII, Lath.

Dr. Kelaart has procured several specimens of this, one of our rarest birds; he showed me a recent individual the day before my

embarkation for England, at the end of March 1853; it was shot in the neighbourhood of Galle, along the course of the Gindurah river, a little inland.

201. CUCULUS TENUIROSTRIS, Gray.

Very abundant throughout the island; it is migratory, appearing about Jaffna in the month of February. The rufous-bellied variety is never seen with us.

202. CUCULUS DICRUOIDES, Hodgs.

The principal habitat of this species seems to be the neighbourhood of Kandy, whence Mr. Thwaites has sent numerous specimens. Dr. Kelaart does not appear to have met with it at Nuwera Elia, as it is not included in his list. I procured it about Cotta, in the low country.

203. ZANCLOSTOMUS VIRIDIROSTRIS, Jerdon. *Mal-coha*, Cing.; lit. Flower Coha. *Handi-koota*, Cing., apud Daniell. *Coosil*, Mal.

Very common in most parts of Ceylon, but abounding in the northern province; it is usually seen in pairs, flitting from tree to tree. It is wary and difficult to shoot, as it creeps through the thickest bushes and trees, and invariably flies out on the contrary side to that on which the shooter stands. It feeds in common with *Eudynamys orientalis*, on the fruit of the banian tree.

My most searching and continuous inquiries into the habits of this and of

204. PHÆNICOPHAUS PYRRHOCEPHALUS, Forst. *Mal-Kandatta*, Cing.,—

failed in eliciting from the natives any information respecting their nidification.

*P. pyrrhocephalus* inhabits the densest jungles, never descending to the ground, but living amid the highest branches. It is unknown in the northern districts; in fact, its range seems limited to the mountain zone, and even there it is very local.

Both these latter species are eaten by the natives, who consider them great delicacies; they sell from threepence to sixpence each. Irides white. In life the feathers round the eye resemble the finest crimson velvet.

[To be continued.]